

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously presented) A composite material, comprising:
a cementitious matrix; and
cellulose fibers incorporated into the cementitious matrix, wherein the cellulose fibers comprise a blend of bleached and unbleached cellulose fibers and wherein the bleached cellulose fibers comprise between about 12 and 17 weight percent of the total cellulose fibers incorporated into the matrix.
- 2.-3. (Canceled)
4. (Original) The composite material of claim 1, wherein the bleached cellulose fibers have an average Kappa number of less than or equal to about 10.
5. (Original) The composite material of claim 1, wherein the bleached cellulose fibers comprise fibers from species selected from the group consisting of Douglas fir, hemlock, spruce, southern yellow pines, kenaf and redwood.
6. (Original) The composite material of claim 1, wherein the bleached cellulose fibers comprise fibers of P. Radiata pine.
7. (Original) The composite material of claim 1, wherein the unbleached cellulose fibers comprise fibers from species selected from the group consisting of Douglass fir, hemlock, white fir, spruce, southern pine, kenaf and redwood.
8. (Original) The composite material of claim 1, wherein the bleached and unbleached cellulose fibers comprise about 0.5%-20% by weight of the composite material.

9. (Original) The composite material of claim 1, wherein the bleached and unbleached cellulose fibers comprise cellulose fibers having an average fiber length of between about 1 mm to 3.5 mm.

10. (Canceled)

11. (Original) The composite material of claim 1, wherein the toughness energy of the composite material is substantially equal to or greater than the toughness energy of an equivalent composite material reinforced with unbleached, premium grade cellulose fibers.

12.-24. (Canceled)

25. (Withdrawn) A composite material, comprising:
a cementitious matrix;
a first portion of cellulose fibers having a Kappa number of less than or equal to about 10; and
a second portion of standard grade cellulose fibers having a Kappa number of greater than about 10.

26. (Withdrawn) The composite material of claim 25, wherein the first portion of cellulose fibers comprises premium grade cellulose fibers.

27. (Withdrawn) The composite material of claim 25, wherein the first portion of the cellulose fibers comprises less than about 50% by weight of the total amount of the two portions of cellulose fibers combined.

28. (Previously presented) A composite material, comprising:
a cementitious matrix; and
cellulose fibers incorporated into the cementitious matrix, wherein the cellulose fibers comprise a blend of bleached and unbleached cellulose fibers and wherein the bleached cellulose fibers comprise between about 12 and 17 weight percent of the total cellulose fibers

incorporated into the matrix, wherein the modulus of rupture of the composite material is greater than about 10 MPa.

29. (Previously presented) A composite material, comprising:
a cementitious matrix not including calcium silicate hydrate; and
cellulose fibers incorporated into the cementitious matrix, wherein the cellulose fibers comprise a blend of bleached and unbleached cellulose fibers and wherein the bleached cellulose fibers comprise between about 12 and 17 weight percent of the total cellulose fibers incorporated into the matrix.

30. (Previously presented) A composite material, consisting essentially of:
10% to 80% weight percent cementitious binder selected from the group consisting of high alumina cement, lime, high phosphate cement, ground granulated blast surface slag cement, and mixtures thereof;

20% to 80% weight percent aggregate selected from the group consisting of ground silica, amorphous silica, micro silica, geothermal silica, diatomaceous earth, coal combustion fly ash, blast furnace slag, granulated slag, steel slag, mineral oxides, mineral hydroxides, clays, magnasite or dolomite, metal oxides and hydroxide, polymeric beads, and mixtures thereof;

0%-80% density modifiers selected from the group consisting of plastic materials, expanded polystyrene or other foamed polymer materials, glass and ceramic materials, microspheres and volcano ashes including perlite, pumice, shirasu basalt, zeolites in expanded forms, and mixtures thereof;

0%-10% additives selected from the group consisting of viscosity modifiers, fire retardants, waterproofing agents, silica fume, geothermal silica, thickeners, pigments, colorants, plasticizers, dispersants, forming agents, flocculent, drainage aids, wet and dry strength aids, silicone materials, aluminum powder, clay, kaolin, alumina trihydrate, mica, metakaolin, calcium carbonate, wollastonite, polymeric resin emulsion, and mixtures thereof; and

cellulose fibers incorporated into the cementitious matrix comprising the cementitious binder and aggregate, wherein the cellulose fibers comprise a blend of bleached and

unbleached cellulose fibers and wherein the bleached cellulose fibers comprise between about 12 and 17 weight percent of the total cellulose fibers incorporated into the matrix.

31. (Previously presented) The composite material of claim 30, wherein the bleached fibers comprise between 12 and 14 weight percent of the total cellulose fibers incorporated into the matrix.

32. (Previously presented) The composite material of claim 30, wherein the cementitious binder is between 30 and 40 weight percent Portland cement and the aggregate consists essentially of 50 to 60 weight percent ground silica.

33. (Previously presented) The composite material of claim 1, wherein the modulus of rupture (MOR) of the composite material is substantially equal to or greater than the MOR of an equivalent composite material reinforced with unbleached, premium grade cellulose fibers.